

# **NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (HCC)**

Plans, directs, and coordinates a national program to develop and establish recommended occupational safety and health standards and to conduct research, training, technical assistance, and related activities to assure safe and healthful working conditions for every working person. In carrying out this mission, the Institute: (1) Administers research in the field of occupational safety and health, including the conduct of health hazard evaluations; (2) develops innovative methods and approaches for dealing with occupational safety and health problems; (3) provides medical criteria which will ensure, insofar as practicable, that no employee will suffer diminished health, functional capacity, or life expectancy as a result of work experience, with emphasis on ways to discover latent disease, establishing causal relationship between diseases and work conditions; (4) serves as a principal focus for training programs to increase the number and competence of personnel engaged in the practice of occupational safety and health; (5) develops and coordinates the appropriate reporting procedures which assist in accurately describing the nature of the national occupational safety and health problems; (6) consults with the U.S. Department of Labor; U.S. Department of the Interior; other Federal agencies; and, in cooperation with the PHS Regional Offices, State and local government agencies; industry; and employee organizations with regard to promotion of occupational safety and health; (7) provides technical assistance to other nations in establishing and implementing occupational safety and health programs; (8) in carrying out the above functions, collaborates, as appropriate, with other Centers and Offices of the CDC.

## **Office of the Director (HCC1)**

(1) Manages the operations of the Institute; (2) maintains liaison with, and provides advice and assistance to, the U.S. Department of Labor, the U.S. Department of the Interior, other Federal agencies, State and local Government agencies, international health organizations, and outside groups; (3) provides liaison with PHS and Departmental components providing occupational health programs for Federal employees; (4) provides policy guidance and coordination to occupational safety and health activities in the HHS Regional Offices; (5) provides leadership and coordinates the Institute's planning, evaluation, resource allocation, regulations, legislation, committee management, and administrative management activities.

## **Office of Administrative and Management Services (HCC11)**

(1) Provides management information, advice, and guidance to the Institute; (2) provides administrative and fiscal services to the Institute; (3) provides technical leadership, guidance, and evaluation of management services performed at other geographic locations; (4) provides management information, advice, and guidance to CDC/OPS regarding the conduct and the evaluation of Staff Office procurement activities with respect to their effectiveness in meeting NIOSH's administrative and programmatic needs; (5) develops internal policies, procedures, and operations; and provides special reports and studies; (6) provides management systems consultation and analyses; (7) coordinates the utilization of data processing services within the Institute; (8) serves as the focal point on matters of internal security and safety; (9) maintains liaison with the Director, Office of Program Support, and Staff Service officials of CDC; (10) serves as the Institute focal point for personnel management activities.  
(Approved: 11/10/2003)

## **Administrative Services Branch (Pittsburgh) (HCC112)**

(1) Provides basic facilities operations, maintenance, and support functions for the offices, laboratories, and grounds at the Pittsburgh Research laboratory; (2) provides access to library and information services for Pittsburgh laboratory personnel; (3) facilitates procurement support for the Laboratory; (4) coordinates Institute activities and overall operations with the facility management activities of the other Agencies operating at the Bruceton Research Center. (Approved 9/4/97)

## **Administrative Services Branch, Cincinnati (HCC113)**

(1) Provides administrative services including procurement (except research and development contracts), property and supply management, vehicle management, space and facilities maintenance, mail and messenger services, timekeeper coordination, and telephone management; (2) reviews and evaluates all local administrative services and provides policy guidance on such matters.

#### Administrative Services Branch (Spokane) (HCC114)

(1) Provides basic facilities operations, maintenance, and support functions for the offices, laboratories, and grounds at the Spokane Research Laboratory; (2) provides access to library and information services for Spokane Research Laboratory personnel; (3) provides site-wide safety and health program support, site environmental compliance activities, employee assistance programs, and employee wellness programs; (4) provides materiel management functions, including inventory control for accountable property, and warehouse supply for daily operations. (Approved: 9/29/2004)

#### Administrative Services Branch, Morgantown (HCC117)

(1) Provides administrative services including procurement (except research and development contracts), property and supply management, vehicle management, space and facilities maintenance, mail and messenger services, timekeeper coordination, and telephone management; (2) reviews and evaluates all local administrative services and provides policy guidance on such matters.

#### Management Systems Branch (HCC115)

(1) Conducts management systems studies and provides technical services in the field of operations management; (2) provides for interface with CDC, PHS, and HHS management systems; (3) assures that all functional groups within the Institute have access to suitable and compatible data processing and services; (4) provides Institute-wide consultation assistance in data processing. (Approved: 11/10/2003)

#### Office of Compensation Analysis and Support (HCC12)

(1) Conducts a program in support of Federal rulemaking to promulgate science-based methods and guidelines mandated by the Energy Employees Occupational Illness Compensation Program Act of 2000 ("the Act") to estimate the occupational radiation doses of claimants under the Act and evaluate the relationship between such doses and cancers incurred by the claimants; (2) develops and implements a program of science-based analysis and policymaking by which the Secretary of Health and Human Services shall consider and issue determinations on petitions by classes of employees to be included as members of the Special Exposure Cohort established under the Act; (3) conducts a program of individual dose reconstruction to estimate and report the radiation doses of claimants under the Act; and (4) identifies and recommends the appointment of occupational physicians to physician panels to be established by the Secretary of Energy to consider the claims of workers with illnesses applying for compensation under state workers' compensation programs. (Approved: 7/2/2001)

#### Office of Extramural Coordination and Special Projects (HCC13)

(1) Provides professional technical advice to the Director and other Institute organizational components; (2) advises the Institute on matters relating to the development and progress of Institute-supported grant research; (3) in cooperation with the offices and operating divisions of the Institute, stimulates research and demonstration grants in relevant priority areas; (4) conducts in-depth review of research, training, and demonstration grant applications by use of consultant expert panels; (5) coordinates programming of research funded under special foreign currency program; (6) coordinates the Institute's research and scientific exchange conducted under bilateral international agreements; (7) maintains contact with professional associations, academic institutions, other Government agencies, and safety and health professionals in HHS Regional Offices; (8) assures Institute compliance with ethical scientific research procedures; (9) conducts or coordinates special short-term technical studies including evaluation of technical information transmitted to the Institute, issuing special advisories to the professional community as appropriate.

#### Pittsburgh Research Laboratory (HCC2)

(1) Provides leadership for prevention of work-related illness, injury, and fatalities of miners; (2) carries out the surveillance of fatal and non-fatal traumatic injuries, occupational diseases, health and safety hazards, and the use of control technology and protective equipment for prevention of injury and disease in mining; (3) conducts research on the measurement, monitoring, and control of dust and other toxic substances to which miners may be exposed; (4) conducts laboratory and field research to evaluate and

control hearing loss and occupational noise exposure in mining; (5) conducts field investigations and laboratory studies on mining injuries and the means for their prevention; (6) conducts laboratory and field investigations to better understand the causes of catastrophic events that may lead to fatalities, such as fires, explosions, and structural or ground failures; (7) develops sensors, predictive models, and engineering controls to reduce miners risk for injury or death; (8) translates research findings, new control technology concepts, and newly identified approaches to health and safety problems affecting miners into usable effective interventions; (9) utilizes the unique facilities and resources of the Laboratory as a National resource in collaboration with other NIOSH units as well as other Departments and Agencies of the government. (Approved 9/4/97)

#### Surveillance, Statistics, and Research Support Activity (HCC22)

(1) Collects and analyzes health and safety data related to mining occupations in order to report on the overall incidence, prevalence and significance of occupational safety and health problems in mining; (2) describes trends in incidence of mining-related fatalities, morbidity, and traumatic injury; (3) conducts surveillance on the use of new technology, the use of engineering controls, and the use of protective equipment in the mining sector; (4) coordinates surveillance activities with other NIOSH surveillance initiatives; (5) provides statistical and computer support for surveillance and research activities of the Laboratory; (6) analyzes and assists in the development of research protocols for developing studies; (7) conducts mining-relevant risk analyses and assists with interpretations for development of NIOSH policy or documents. (Approved 9/4/97)

#### Dust and Toxic Substance Control Branch (HCC24)

(1) Develops, plans, and implements a program of research to develop or improve personal and area direct reading instruments for measuring mining contaminants including but not limited to respirable dust, silica, and other toxic substances and mixtures; (2) conducts field tests, experiments, and demonstrations of new technology for monitoring and assessing mine air quality; (3) designs, plans, and implements laboratory and field research to develop airborne hazard reduction control technologies; (4) carries out field surveys in mines to identify work organization strategies that could result in reduced dust or toxic substance exposure; (5) evaluates the performance, economics, and technical feasibility of engineering control strategies, novel approaches, and the application of new or emerging technologies for underground and surface mine dust and toxic substance control systems; (6) develops and evaluates implementation strategies for using newly developed monitors and control technology for exposure reduction or prevention. (Approved 9/4/97)

#### Hearing Loss Prevention Branch (HCC25)

(1) Plans and conducts laboratory and field research on noise-induced hearing loss in miners; (2) conducts field dosimetric and audiometric surveys to assess the extent and severity of the problem and to identify those mining segments in greatest need of attention and to objectively track progress in meeting loss prevention goals; (3) conducts field and laboratory research to identify noise generation sources and to identify those areas most amenable to intervention activities; (4) develops, tests, and demonstrates new control technologies for noise reduction; (5) evaluates technical and economic feasibility of controls; (6) develops, evaluates, and recommends implementation strategies to promote the adoption and use of noise reduction technology. (Approved 9/4/97)

#### Mining Injury Prevention Branch (HCC26)

(1) Conducts laboratory, field, and computer modeling research to focus on human physiological capabilities and limitations and their interactions with mining jobs, tasks, equipment, and the mine work environment; (2) assesses the health and safety relevance of mining equipment design features using scientific and engineering techniques, and analyses of reported case-studies of mining incidents that lead to traumatic injuries or fatalities; (3) designs and conducts epidemiological research studies to identify and classify risk factors that cause, or may cause, traumatic injuries to miners; (4) designs, builds, and tests proposed interventions, including demonstrations of proposed technologies using laboratory mock-ups, full-scale demonstrations at the laboratory's experimental mines, or through field evaluation in operating mines; (5) evaluates and recommends implementation strategies for injury prevention and control technologies developed by the Laboratory. (Approved 9/4/97)

#### Disaster Prevention and Response Branch (HCC27)

(1) Conducts laboratory and field investigations of catastrophic events such as explosions and catastrophic structural or ground failures to better understand cause and effect relationships that initiate such events; (2) designs and implements appropriate intervention strategies; (3) develops, tests, and promotes the use of disaster prediction and risk evaluation systems for control or reduction of risk; (4) develops criteria and tests for explosives to determine their suitability for mine use and transportation; (5) evaluates and recommends implementation strategies for disaster prevention; (6) assists in the development and evaluation of curricula for mine rescue and firefighting in conjunction with other health education, health communication, and other information and education activities of the Institute. (Approved: 6/7/2002)

#### Health Effects Laboratory Division (HCC3)

(1) Provides new focused research capabilities in mechanisms of occupational disease and identifies causative substances and early indicators (biomarkers) of response to chemical, biological, and physical substances which will be directed at prevention and control of occupational disease and integrated into the field research and services programs in NIOSH; (2) develops new state-of-the-art research techniques in physiology, human and animal cellular and molecular pathology; (3) develops new state-of-the-art research techniques in the areas of biochemistry, immunotoxicology, pharmacology, molecular and cellular biology, genetic toxicology, and imaging; (4) provides new research to develop and improve methods for environmental measurement of aerosols; (5) develops and evaluates (including development of performance criteria) intelligent, real-time personal and area direct reading instruments for chemical, biological and physical agents; (6) develops and improves techniques for measuring exposures and human responses to workplace exposures; (7) develops new research techniques in the areas of aeromicrobiology, particle characterization, molecular characterization, micro-sensors, advanced sampling and instrumentation, electronic monitoring, electrical and mechanical engineering; (8) develops new methodologies for exposure modeling of current and past exposures for use in applied research; (9) provides new research capabilities for developing and establishing engineering solutions for the control of occupational diseases and for utilizing engineering techniques to solve problems; (10) develops new research techniques in the areas of computerized workplace simulations and mathematical models; (11) provides environmental and biological laboratory services for all field and laboratory programs in NIOSH; (12) develops and evaluates effective communication strategies for promoting health education to communicate risk and prevention recommendations to those at risk and form coalitions to advocate prevention activities. (Approved 11/18/94)

#### Toxicology and Molecular Biology Branch (HCC32)

(1) Provides focused research in workplace exposures and identifies causative substances and biomarkers of response to chemical, biological, and physical substances; (2) develops laboratory techniques or modifications that could be useful for population-based or large environmental testing; (3) develops molecular programs to examine the toxic effects of workplace exposures/agents on human, animal, and cellular systems; (4) defines the levels and circumstances of exposures that lead to development of pre- and post-toxic biomarkers, toxic responses, repair of damage or alleviation of damage, mechanisms of toxicity, and recommendations for prevention and control of toxic exposures; (5) develops integrated research programs in areas including cell to cell communication, cellular interaction, genome activations, responses to and production/release of cellular signals; and mechanisms of control, blockage, and homeostasis of cellular systems, broadly interpreted with respect to environmental and occupational agents; (6) studies microbial cellular components and production and release of exotoxins and mycotoxins in context with the holistic human and animal response, including targets such as the lung, skin, and nervous system; (7) provides support to the Division on state-of-the-art research in the areas of toxicology, molecular and cellular biology. (Approved 11/18/94)

#### Pathology and Physiological Research Branch (HCC33)

(1) Provides research into new ways to identify disease mechanisms, develops pre-disease early warning systems, identifies methods for repair or resolution of disease, and develops and applies new imaging techniques; (2) examines in an applied and preventive research mode the effects of workplace exposures on human and animal body functions and cellular response-receptors in the development of disease/disfunction, mechanisms of action, early functional markers of detection, and recommendations for prevention and control/intervention; (3) provides advice and collaborative service for NIOSH

investigators interested in physiological/pharmacological effects of workplace exposures on field-based and animal/cellular systems; (4) examines the alteration of function based on pre-existing disease, induced-disease, or cellular/organ structural impairment in the context of responses to occupational exposures, both actual and laboratory-generated; (5) assists HELD and other NIOSH divisions by providing animal exposure and pathological support in the development, use, and evaluation of exposure systems that mimic the occupational situation, reach the target organ, and results in sensitive models of change, structural or functional; (6) provides animal pathology support to researchers through the development of sensitive animal-specific tools, molecular probes, or recognition techniques that can be modified or used for animal models of occupational disease/exposure. (Approved 11/18/94)

#### Exposure Assessment Branch (HCC34)

(1) Provides research methods for the Division to develop and improve methods for environmental measurement of aerosols; (2) develops and evaluates real-time personal and area direct reading instruments for chemical, biological, and physical agents; (3) develops techniques for measuring human responses to workplace exposures; (4) provides new research techniques in the areas of aeromicrobiology, particle characterization, molecular characterization, micro sensors, advanced sampling and instrumentation, electronic monitoring, and electrical and mechanical engineering; (5) coordinates with other NIOSH laboratory-based research (particularly the toxicology and molecular biology research), as well as NIOSH field studies and health hazard evaluations to advance exposure assessment methods; (6) develops new methodologies for exposure modeling of current and past exposure for use in applied research (epidemiological and molecular epidemiological studies). (Approved 11/18/94)

#### Engineering and Control Technology Branch (HCC35)

(1) Provides research capabilities for developing and establishing engineering solutions for the control of occupational disease; (2) coordinates with the Exposure Assessment Branch to develop engineering techniques to solve problems in measuring and monitoring programs; (3) develops and utilizes techniques in computerized workplace simulations and mathematical models; (4) develops passive protective devices and systems for preventing or minimizing worker exposure to hazardous chemical, biological, and physical substances; (5) develops sophisticated personal protective equipment to provide workers with information about their working environment. (Approved 11/18/94)

#### Analytical Services Branch (HCC36)

(1) Provides environmental and biological analytical laboratory services such as immunotoxicological, pharmacological, molecular and cellular biological analysis, identification, quantification, and other requested characterizations for all NIOSH research and service programs; (2) provides analytical services such as multi-chemical mixture analysis, particle size analysis, component identification, quantification, and other requested characterization; (3) develops state-of-the-art analytical methods for the evaluation and control of newly identified workplace hazards and exposures that could lead to occupational disease. (Approved 11/18/94)

#### Biostatistics Branch (HCC37)

(1) Provides experimental design and support of laboratory-based research to address the statistical aspects of projects in the Division and throughout the Institute; (2) verifies the statistical quality, both in the design and analysis phase of all experimental research in the Institute; (3) develops and directs the application of new statistical methods as well as the design and analysis of field research projects for the Institute; (4) develops computerized methods for independent research initiatives in statistical methods to advance basic research in experimental and observational studies; (5) collaborates in the design of laboratory and field research studies, providing consultation through the course of the research on computerized methods of data collection and interpretation of results. (Approved 11/18/94)

#### Health Communication Research Branch (HCC38)

(1) Designs, implements, and evaluates effective communication strategies for the Division using expertise in health education, and communication; (2) develops messages, materials, and methods to clearly and effectively communicate risks and prevention recommendations to those at risk and those that can most effectively implement or promote prevention activities; (3) evaluates the effectiveness of

the Division's health communication to determine the impact and contribution to prevention of workplace injury and disease; (4) coordinates with others in the field of health communication to form coalitions to advocate prevention activities. (Approved 11/18/94)

#### Education and Information Division (HCC4)

(1) Develops from existing scientific and technical information documents containing (a) criteria for recommended occupational safety and health standards, and (b) technical and scientific information relevant to a variety of occupational safety and health issues; (2) develops recommended health and safety standards under the Occupational Safety and Health Act of 1970 and the Federal Mine Safety and Health Act of 1977; (3) prepares and coordinates with the Office of the Director comments and testimony on regulations proposed by the Department of Labor and other departments or agencies that pertain to occupational diseases or injuries; (4) assists the Institute Director in establishing and operating a priority system for research, surveillance, document development, and recommended standards; (5) prepares and at least annually revises the legislatively mandated toxic substance list; (6) establishes and maintains a library and a clearinghouse for receiving, storing, retrieving, and disseminating technical information on occupational safety and health; (7) provides risk evaluations for NIOSH policy recommendations; (8) develops and tests occupational safety and health training materials, technologies, strategies, and courses; (9) determines occupational safety and health workforce needs on a nationwide basis and develops strategies to meet those needs; (10) develops methods, through research, to evaluate and monitor the effectiveness of training, including program features, faculty, training methods, and outcome measures; (11) conducts the NIOSH summer intern training program for minority students; (12) serves as the NIOSH printing office; (13) provides graphic design and audio-visual standards and support for the Institute; (14) serves as the NIOSH Docket Office; (15) evaluates in coordination with other divisions the economic and societal burden of occupationally induced diseases and injuries; (16) establishes and maintains the NIOSH archives; and (17) coordinates all relevant Division activities with the Office of the Director. (Approved 6/9/95)

#### Information Resources Branch (HCC42)

(1) Operates the Institute's libraries for occupational safety and health information for use by occupational safety and health professionals; (2) acquires, disseminates, and coordinates scientific and technical information relating to occupational safety and health in support of Division activities and NIOSH research programs; (3) plans, implements, and coordinates dissemination activities for all NIOSH publications (printed and electronic); (4) verifies printing clearance for NIOSH publications within NIOSH/CDC procedures; (5) develops and manages the NIOSH exhibit program for professional meetings and conferences; (6) develops and maintains electronic data systems for the Institute to assess information; and (7) establishes and maintains the NIOSH archives. (Approved 6/9/95)

#### Training Research and Evaluation Branch (HCC44)

(1) Develops, through research and evaluation, training resources in industrial hygiene, safety, occupational medicine, nursing, and allied professions; (2) collaborates on cooperative training programs with qualified outside organizations; (3) determines strategies for and advises on occupational safety and health workforce needs on a nationwide basis; (4) defines and evaluates selected workforce certification/accreditation programs; (5) establishes career development guidelines for training of employers and employees in the prevention of injuries and diseases; (6) provides graphic design and audio-visual standards and support for the Institute; (7) consults and advises NIOSH professionals on presentation techniques and selection of media; and (8) consults on workforce development. (Approved 7/21/04)

#### Document Development Branch (HCC45)

(1) Develops recommended occupational safety and health standards based on knowledge of health and safety risks, and technologic feasibility; (2) coordinates testimony in response to the Department of Labor, Environmental Protection Agency, and other Federal and State agencies' rulemaking; (3) incorporates recommended work practices, engineering controls, and available evidence of technological feasibility into documents and testimony; (4) analyzes the economics of occupational safety and health interventions; (5) maintains the NIOSH Docket Office; and (6) provides editorial support for NIOSH publications; and (7) conducts policy review of other Divisions and internationally

produced documents. (Approved 1/15/97)

#### Risk Evaluation Branch (HCC46)

(1) Identifies occupational health and safety hazards through qualitative reviews of the scientific literature; (2) conducts quantitative risk analyses of health and safety hazards; (3) researches and develops new quantitative risk assessment methodologies; (4) identifies information on worker exposures for risk characterization; (5) assists the Director of NIOSH in establishing a priority system for document development and recommended standards; (6) conducts intervention studies on the effectiveness of current standards in preventing occupational diseases and injuries; and (7) conducts scientific reviews of internationally produced documents. (Approved 1/15/97)

#### Division of Surveillance, Hazard Evaluations, and Field Studies (HCC5)

(1) Develops and maintains a surveillance system of the Nation's work force and its environs to make an early detection and continuous assessment of the magnitude and extent of job-related illness, exposures, and hazardous agents; (2) conducts the legislatively mandated health hazard evaluation and industrywide epidemiological research programs through longitudinal record studies and clinical/environmental field studies and surveys to identify the occupational causes of disease in the working population and their offspring, and to determine the incidence and prevalence of acute and chronic effects from work-related exposures to toxic and hazardous substances; (3) conducts epidemiological research for input to criteria for standards for the control of occupational health hazards; (4) provides, upon request and on a self-initiated basis, technical assistance, demonstrations, and consultation on technical matters pertaining to occupational safety and health to other Federal agencies, State, and local agencies, other technical groups, unions, employers, and employees.

#### Hazard Evaluations and Technical Assistance Branch (HCC52)

The Health Evaluations and Technical Assistance Branch conducts the legislatively-mandated health hazard evaluation program in response to employer and employee representatives' requests for hazard evaluations and toxicity determinations, including coordinated medical and industrial hygiene field surveys; provides medical/epidemiologic and industrial hygiene technical and consultative assistance to Federal, State, and local agencies, labor, industry, and other groups or individuals to control occupational health hazards and to prevent occupational illness and disease. (Approved: 12/8/2003)

#### Health-Related Energy Research Branch (HCC56)

(1) Plans and conducts analytic epidemiological research of workers at Department of Energy and other energy-related facilities to determine the incidence and prevalence of acute and/or chronic disease in the working population and their offspring, and to evaluate possible associations between work related exposures and disease; (2) determines the nature and extent of occupational exposure to physical, chemical, and biological agents in energy-related industries through coordinated clinical field studies, industrial hygiene field surveys, and longitudinal record studies; (3) disseminates the findings of such research in peer-reviewed scientific journals, technical articles and reports, and through presentations at scientific meetings; notifies workers, companies, and public of outcomes and impact of such studies; (4) provides technical assistance to, and consults with, other Federal, State, and local government agencies, as well as national and international private organizations on a wide range of occupational health issues; (5) coordinates Branch activities through the Division with other Centers in CDC, Agency for Toxic Substances and Disease Registry (ATSDR), Department of Energy and other public and private organizations as required. (Approved: 7/1/93)

#### Industrywide Studies Branch (HCC53)

(1) Conducts analytic epidemiologic and industrial hygiene research; (2) determines the nature and extent of acute and chronic responses to potentially hazardous agents in the work environment; (3) develops and uses rigorous methods for exposure assessment, epidemiologic study design to address specific hypotheses; (4) develops study protocols that undergo scientific and human subjects review; (5) selects topics for research studies based on research needs from the occupational health literature and NIOSH priority research areas; (6) disseminates the findings of research studies at scientific meetings and in the peer-reviewed scientific literature; (7) contributes to generalizable knowledge about the determinants of occupational exposures, and the relationship between specific chemical or physical

exposures and disease. (Approved: 12/8/2003)

#### Surveillance Branch (HCC54)

(1) Develops and maintains a national surveillance system for the early detection and continuous assessment of the magnitude and extent of occupational illness, and exposures to hazardous agents, using new and existing data sources such as Federal, State, and local agencies, labor, industry, tumor registries, physicians, and medical centers; (2) coordinates the collection of surveillance information with the U.S. Department of Labor's compliance activities and State research and compliance activities; (3) identifies and develops, or in certain instances, supports the development of new sources of data for the surveillance system; (4) develops medical surveillance systems for previously exposed workers.

#### Spokane Research Laboratory (HCC6)

(1) Provides leadership for prevention of work-related illness, injury, and death in the extractive industries in the Western United States; (2) conducts surveillance and tracks trends of fatal and non-fatal traumatic injuries, occupational diseases, health and safety hazards, and the use of control technology in the extractive industries, with a focus on unique Western issues such as those associated with deep metal mines, Western coal mines, and precious metal deposits; (3) conducts field investigations, health hazard evaluations, and laboratory studies of occupational diseases, injuries, and fatalities with focus on western-area mineral-extractive industries; (4) conducts laboratory and field investigations to better understand the causes of catastrophic events that may lead to multiple injuries and fatalities, such as collapse of underground workings, massive slope failures, and the collapse of mining facilities; (5) develops, tests, and demonstrates sensors, predictive models, and engineering control technologies to reduce miners risk for injury or death; (6) develops and recommends appropriate criteria for new standards, NIOSH policy, documents, or testimony related to health and safety in the extractive industries. (Approved 9/4/97)

#### Extramural Coordination and Information Dissemination Activity (HCC62)

(1) Coordinates with other education and information dissemination activities within the Institute to assure that coordinated and comprehensive mining research information is effectively integrated into the NIOSH dissemination and intervention strategies; (2) serves as the laboratory focal point for partnerships with labor, industry and academia involved with Western extractive industries; (3) assists in the development of mission-relevant CRADAs and patents; (4) coordinates mission-relevant technical assistance and response activities for the western United States. (Approved 9/4/97)

#### Mining Surveillance and Statistics Support Activity (HCC63)

(1) Describes trends in incidence of mining-related fatalities, morbidity, and traumatic injury; (2) conducts surveillance on the use of new technology and the use of engineering controls; (3) coordinates the surveillance activities with other Institute-wide surveillance initiatives; (4) provides statistical support for all surveillance and research activities of the Laboratory; (5) assists in the development of research protocols; (6) communicates the results of surveillance activities to researchers to assist in the planning and prioritization of future studies. (Approved 9/4/97)

#### Mining Injury and Disease Prevention Branch (HCC64)

(1) Designs and conducts field and laboratory research studies to identify and classify risk factors that cause, or may cause, traumatic injuries or illness to miners; (2) designs, builds, and tests proposed interventions to reduce risk of injury or disease, and conducts demonstrations of proposed control technologies; (3) assesses the health and safety implications of mining equipment design features using scientific and engineering techniques; (4) evaluates and recommends implementation strategies for injury and disease prevention and the effective utilization of control technologies developed by the laboratory. (Approved 9/4/97)

#### Catastrophic Failure Detection and Prevention Branch (HCC65)

(1) Conducts laboratory and field investigations of catastrophic events such as collapse of underground workings, massive slope failures, collapse of mine facilities, or other events that lead to traumatic injuries or fatalities; (2) develops computer visualization models to simulate mine conditions and test



alternative mining methods and approaches for risk reduction and catastrophic failure prevention; (3) develops, tests, and promotes the use of catastrophic failure prediction and risk evaluation systems; (4) evaluates and recommends implementation strategies for catastrophic failure prevention. (Approved 9/4/97)

#### Division of Applied Research and Technology (HCC9)

(1) Provides national and international leadership for the prevention of occupational injury and illness through applied research; (2) conducts laboratory studies, field studies, and demonstrations to develop and evaluate engineering control technology for biological, chemical, and physical hazards, including ergonomic controls for prevention of workplace injury and illness; (3) conducts laboratory studies, field studies, and demonstrations to develop and evaluate work organization strategies to reduce work-related stress, illness and injury and foster healthy worker sensitivity to occupational hazards, and detection of the precursors of or presence of disease or illness; (5) conducts research and demonstration projects to evaluate and improve the effectiveness of occupational health services, and to determine the social and economic burden of occupational illnesses and injuries, and the benefits of interventions; (6) serves as a resource to researchers who may require division expertise in their field or laboratory research; (7) disseminates sampling and analytical methods information in the NIOSH Manual of Analytical Methods. (Approved: 12/8/2003)

#### Biomonitoring and Health Assessment Branch (HCC93)

(1) Plans and conducts laboratory and worksite research on the assessment of workers' exposures or effects of exposures, through the development of biomarkers and analysis of various human tissues and fluids; (2) partners in intervention or prevention studies in which exposure or effect of exposure is assessed through biomonitoring; (3) evaluates worker sensitivity factors that may impact the result of a hazardous exposure; (4) provides technical assistance and consultation to the Institute, other governmental agencies, private industry, and organized labor regarding the toxicologic aspects of workers' response to etiologic agents in the occupational setting; (5) conducts health assessment and exposure assessment studies to determine reproductive, immunotoxic and genotoxic effects from worker exposures to toxicants; (6) provides biomonitoring and health assessment consultation and analyses for health hazard evaluations, epidemiologic, intervention and prevention, environmental measurement and other investigations; (7) disseminates the information gained during research on sampling and analytical methods by publications in the peer-reviewed literature and other appropriate publications. (Approved: 12/8/2003)

#### Chemical Exposure and Monitoring Branch (HCC94)

(1) Conducts research that develops, improves, and evaluates analytical methods for the qualitative and quantitative analysis of toxic materials, their products, and other significant hazards found in the workplace, in the physical environment, and in industrial and biologic materials; (2) provides industrial hygiene measurement consultation and specialty analyses to NIOSH research through in-house and contract laboratory; (3) provides expert consultation regarding science and analytical methods to assist NIOSH, other government agencies, and voluntary standard setting organizations in the development of standards and occupational health documents; (4) conducts research to improve, evaluate and establish performance requirements for sampling and analytical methods and direct reading instrumentation used in the evaluation and prevention of exposures to hazardous levels of chemical agents; (5) disseminates the information gained during research on sampling and analytical methods by publications in the peer-reviewed literature and in the NIOSH Manual of Analytical Methods. (Approved: 12/8/2003)

#### Engineering and Physical Hazards Branch (HCC95)

(1) Plans and conducts worksite and laboratory research to identify, evaluate, develop and implement technology to prevent workers' exposures to chemical, biological, and physical agents; (2) plans and conducts worksite and laboratory research to identify hazards and engineering controls related to emerging technologies and changing work environments, including the application of substitution, isolation, and ventilation technology to reduce hazardous exposures; (3) plans and conducts laboratory and worksite research to minimize occupational noise exposures and to develop strategies to prevent occupational hearing loss; (4) plans and conducts worksite and laboratory research on occupational health risks resulting from workers' exposures to physical, chemical, and biological agents; (5) plans and conducts worksite and laboratory research in aerosol science and air filtration; (6) performs

modeling research to evaluate the efficacy of various sampling and control technologies through the use of computational fluid dynamics, wind tunnel experimentation, particle image velocimetry, and other techniques; (7) develops or evaluates new or improved instruments and exposure assessment techniques, evaluates criteria for the recommendation of such instruments or techniques, and promotes the transfer of widespread application of effective engineering control measures for safeguarding workers' health; and (8) provides expert consultation to elements of NIOSH, other agencies, and external partners, in the application of new and improved techniques for hazard prevention and engineering control for the formulation of effective and credible workplace standards. (Approved: 12/8/2003)

#### Organizational Science and Human Factors Branch (HCC96)

(1) Conducts applied laboratory and worksite research on organizational and ergonomic interventions to prevent occupational illness and injury, including physical, neurobehavioral, and psychological disorders, and the economic, social, and organizational burdens associated with these outcomes. Organizational and ergonomic topics of study include management, supervisory, and employment practices; worker demographics and special populations; job, tool, and environmental design; design of health and safety services; and the interaction of these conditions. The scope of research includes (a) etiologic and health effects studies to serve as the basis for intervention strategies, (b) design and testing of prototype interventions in laboratory and controlled environments, and collaboration with external partners and organizations to field test and validate, and disseminate intervention techniques; (c) methodological research to better characterize exposures, outcomes, and their relationships; (2) provides technical assistance to other NIOSH and governmental units and to private organizations in the investigation of organizational and physical stressors in the workplace and in the design and testing of prevention measures; (3) develops and disseminates scientific and technical reports on organizational and physical risk factors at work, and intervention strategies. (Approved: 12/8/2003)

#### Division of Respiratory Disease Studies (HCCA)

(1) Provides national and international leadership for understanding and preventing occupational respiratory disease; (2) plans, designs and conducts a national research program for the prevention of occupational respiratory disease; (3) upon request, conducts hazard evaluations and provides technical assistance to address emerging problems in occupational respiratory disease; (4) plans, designs and conducts a national surveillance program for occupational respiratory disease; (5) communicates study findings for the prevention of occupational respiratory diseases and evaluates the effectiveness of these communications; (6) administers a program of legislatively mandated medical services for coal miners under the Federal Mine Safety and Health Act (FMSHAct) of 1977. (Approved: 6/7/2002)

#### Office of the Director (HCCA1)

Directs and manages the operations of the Division of Respiratory Disease Studies. (Approved 8/30/96)

#### Communication and Information Activity (HCCA12)

(1) Collaborates with Division staff to translate findings from research, surveillance and other Division activities to produce products that motivate respiratory disease prevention activities; (2) coordinates with other health communication, health education, and information dissemination activities within the Institute to ensure the effective dissemination of these products; (3) coordinates all Division activities relating to grants and cooperative agreements in conjunction with the NIOSH Office of Extramural Coordination and Special Projects; (4) provides the Division with systems analysis, archiving guidance, and computer programming support; (5) coordinates and promotes regular seminars, workshops, and other meetings as necessary. (Approved: 11/10/2003)

#### Field Studies Branch (HCCA7)

(1) Designs and conducts short- and long-term field investigations of occupational respiratory diseases; (2) responds to requests for health hazard evaluations and technical assistance relevant to occupational respiratory disease; (3) conducts morbidity and mortality studies relating to occupational respiratory diseases in order to: (a) identify causal agents (and other risk factors); (b) quantify exposure-effect relationships; (c) evaluate prevalence and severity of specific respiratory diseases in selected worker

populations; (4) conducts environmental studies, industrial hygiene research, experiments, and demonstrations of workplace exposures and controls including the use of respiratory protective equipment, and to study problems created by new technology; (5) provides statistical design and implements data analysis and verification for Division research projects; (6) develops and evaluates research methods of data collection, processing, and statistical analysis. (Approved: 1/6/99)

#### Laboratory Research Branch (HCCA9)

(1) Conducts laboratory research complementary to, and coordinated with, field investigations of occupational respiratory diseases; (2) formulates and implements laboratory research which will identify factors involved in the early detection and differential rates of susceptibility to occupational respiratory disease; (3) develops new methods to improve detection and measurement of human response to respiratory hazards found in the workplace; (4) develops new methods and technologies to characterize and measure respiratory exposure agents; (5) devises and conducts clinical research studies on the causes, detection, and quantification of occupational respiratory disease; (6) in conjunction with researchers in the Health Effects Laboratory Division (HELD), carries out an experimental pathology program utilizing appropriate laboratory animals to study the mechanism and progression of lung damage from occupational respiratory exposures. (Approved: 6/7/2002)

#### Surveillance Branch (HCCAB)

(1) Collects, analyzes and disseminates health and hazard information related to occupational respiratory diseases; (2) collaborates on the establishment of health surveillance systems in order to: (a) summarize information relating to overall incidence, prevalence, mortality, and importance of occupational respiratory diseases; (b) describe the occurrence of specific diseases (including temporal trends) with regard to occupation, industry, geography, demographic characteristics, and other factors for which information is available; (c) describe the distribution and trends in occupational exposure to agents responsible for respiratory diseases; (3) produces and develops reports describing workplace hazards and work-related occupational lung diseases; (4) coordinates with other Federal agencies and promulgates rules as provided for in the FMSHAct of 1977, and the OSHAct of 1970, to provide for the collection and reporting of health and hazard surveillance data related to occupational respiratory diseases; (5) provides technical assistance and recommendations concerning medical screening and health surveillance of workers exposed to respiratory hazards in the workplace; (6) conducts surveys of hazardous exposures and the application and use of various exposure control technologies; (7) synthesizes data and frames recommendations for priority setting, hypothesis generation, and improved methods for data collection; (8) develops and evaluates surveillance methods of data collection, processing, and statistical analysis which are relevant to the Division mission; (9) Plans, coordinates, and processes the medical examinations provided under the FMSHAct of 1977; (10) operates a certification program for participating medical facilities and physicians; (11) evaluates and approves employer programs for the examination of employees in accordance with published regulations; (12) arranges for the examination of employees who work at locations not having an approved examination program; (13) operates the National Coal Workers Autopsy Program. (Approved: 12/8/2003)

#### Division of Safety Research (HCCB)

(1) As the focal point for the Institute's occupational traumatic injury prevention and safety program, identifies the major causes of injuries and safety hazards, identifies interventions to improve worker safety, and supports implementation of these interventions; (2) develops scientifically sound recommendations for programs to prevent and control occupational traumatic injuries; (3) develops scientifically sound recommendations for the performance and use of equipment and various other devices for protecting workers; (4) evaluates the impact of targeted control programs for preventing or mitigating traumatic injury, diseases, disability, and death; (5) manages program planning/project coordination, including the Division's financial and personnel management systems, and ensures the scientific and program integrity of Division functions. (Approved: 6/7/2002)

#### Analysis and Field Evaluations Branch (HCCB5)

(1) Identifies causes or specific risk factors and hazards associated with fatal and non-fatal occupational traumatic injuries (acute, subacute, chronic, or cumulative) and safety failures; (2) determines the

impacts and efficacy of intervention strategies and safety systems for the prevention of these conditions, and the promotion, maintenance, or restoration of an injury free, well-protected work force; (3) develops scientifically sound methods for the conduct of analytic epidemiologic investigations and applied field intervention trials to assess the effectiveness of new, redesigned, and existing technical, managerial, regulatory, and system safety engineering and occupational medicine approaches and programs for preventing injuries and for utilizing recommended work practices and equipment; and (4) provides technical assistance to other components of the Division and to other occupational safety and health entities in evaluating and improving the implementation of recommended interventions. (Approved: 12/12/2003)

#### Protective Technology Branch (HCCB7)

(1) Designs and develops new and improved safety engineering systems and controls, protective equipment, and work practices to protect workers from all types of trauma; (2) develops and validates test and measurement methods necessary to conduct safety controls and equipment research; (3) tests and evaluates, in the laboratory, simulated workplace, and actual work-sites, existing and new technological approaches to worker protection, and occupational injury prevention and control; (4) analyzes potentially hazardous operations using systems safety and/or other engineering techniques to identify safety engineering control and safe work practice strategies; (5) evaluates the use and performance of safety engineering controls and protective equipment; (6) develops scientifically sound recommendations for the performance and use of existing or redesigned safety engineering controls, work practices, protective equipment, exposure assessment tools, and occupational safety research technologies; (7) develops technical information to support recommendations for safety standards; (8) provides recommendations to the Analysis and Field Evaluations Branch regarding specific hazards or interventions requiring further epidemiologic research and/or evaluation; (9) provides technical assistance and consultation to other Branches within the Division of Safety Research, other components of NIOSH and CDC, other Federal agencies, and other public and private sector organizations on the use of protective technology for the prevention of worker exposures to safety hazards that lead to injuries. (Approved: 12/12/2003)

#### Surveillance and Field Investigations Branch (HCCB8)

(1) Identifies and describes distributions of fatal and non-fatal occupational traumatic injuries and safety hazards; (2) collects, reviews, and summarizes data on injuries and safety hazards, including the major types of traumatic injury and death among workers and those due to the failure of safety measures; (3) conducts in-depth investigations of selected cases or clusters of injuries or safety hazards; (4) evaluates trends in occupational injury at the national level; (5) makes comparisons among rates found for regions, industries, occupations, and other important variables; (6) provides data which serves as a basis for planning, providing, and evaluating occupational injury prevention and safety services; (7) identifies specific problem areas to be investigated further by the Analysis and Field Evaluations and Protective Technology Branches; (8) provides assistance to State agencies to upgrade occupational injury and injury hazard surveillance at the State level. (Approved: 12/12/2003)

#### National Personal Protective Technology Laboratory (HCCC)

(1) Conducts work site surveillance of hazards for which protective technologies and equipment are used to protect workers, and studies patterns of personal protective technology (PPT) use; (2) conducts a variety of laboratory and field research relating to the development and evaluation of innovative personal protective technologies and equipment; (3) researches and develops criteria, standards and guidelines relating to PPT performance, quality, reliability and efficacy; (4) directs and carries out the NIOSH respirator approval program and related laboratory, field, quality, and records activities; (5) produces and disseminates research findings, technical information, training materials, performance criteria, and recommendations for using personal protective equipment to improve protection of workers; (6) develops, studies and assesses the effectiveness of communications and training approaches and technologies relating to PPT. (Approved: 6/7/2002)

#### Respirator Branch (HCCC2)

(1) Processes respirator approval applications; i.e., certifying performance, quality, reliability, and efficacy of respiratory protection devices in accordance with Federal regulations and NIOSH policy; (2) evaluates and maintains official records on NIOSH-approved respirators; (3) develops and promulgates

new approval standards and regulations; (4) establishes NIOSH policy relating to the approval of respirators, including approval policies for innovative respirator features; (5) evaluates quality control plans, including in-plant manufacturing-site quality system audits, and monitors the quality and performance of certified respirators; (6) investigates field problems associated with NIOSH-certified respirators; (7) recommends NIOSH activities to address product non-conformance such as NIOSH approval rescission, product recalls or retrofits, and public notification of potentially unsafe products; (8) provides technical assistance on the selection, use, maintenance, and operation of respiratory protective equipment. (Approved: 6/7/2002)

#### Technology Branch (HCCC3)

(1) Encourages and conducts research related to innovative technologies for new products; (2) conducts laboratory and field research of methods and PPT performance, quality, reliability, and efficacy, especially for new or emerging hazards; (3) investigates emerging hazards and personal exposures to identify worker PPT needs and technology gaps; (4) conducts research for the effective integration of various personal protective technologies and equipment; (5) recommends performance, quality, reliability, and efficacy criteria; (6) conducts PPT failure investigations and analyses, and recommends criteria to improve PPT; (7) conducts hypothesis testing-based research; (8) studies and improves human/technology interfaces; (9) conducts research into the physiologic and psychologic stressors and worker responses to protective technologies and equipment; (10) recommends user guidelines, including cautions, limitations, and restrictions of use; (11) participates on national and international standards setting committees and establishes a national/international database of relevant standards. (Approved: 6/7/2002)

#### Surveillance, Communication, and Training Branch (HCCC4)

(1) Collects data relevant to work site hazards and worker protection needs; (2) conducts surveillance of hazards for which protective technologies and equipment are used; (3) studies patterns of personal protective technology use; (4) investigates barriers to effective use of protective technologies; (5) conducts surveillance of PPT failures, and cautions and limitations of personal protective technologies and the programs guiding their use; (6) reports on the overall incidence, prevalence, and trends of illnesses and injuries of personnel engaged in high-risk occupations or working in extreme environments; (7) designs field studies in collaboration with other branches within NPPTL; (8) produces and disseminates technical information, research findings, training materials, performance criteria, and recommendations for using personal protective equipment to improve protection of workers; (9) studies and assesses communication effectiveness; (10) develops and evaluates the effectiveness of training approaches, e.g., technologies that simulate the effect of PPT on workers; (11) provides writing and editing support to the Laboratory's personnel. (Approved: 6/7/2002)